

which issued on February 27, 2001.

IN THE SPECIFICATION:

On page 1, line 4, delete "Not Applicable", and
insert therefor This application is a continuation application
for Serial No. 09/113,418, filed on July 10, 1998. *now US 6,497,801* *DAV*

IN THE CLAIMS:

Please cancel claims 1-16 without prejudice and insert
the following claims:

17. A system for electroplating a layer of material on
a semiconductor wafer, said system comprising:

an electrochemical cell, said electrochemical cell
comprising a primary anode, a cathode contact, and a chamber,
said primary anode and said cathode contact disposed within said
chamber;

at least one secondary anode, said secondary anode

for providing a variable current to said semiconductor wafer;

a metallic solution, said metallic solution disposed within said electrochemical cell; and

a power source, said power source coupled to said primary anode, to said at least one said secondary anode and to said cathode contact, said power source capable of producing said variable current by providing varying levels of voltage to said primary anode and to said secondary anode.

18. The system as recited in claim 17 wherein said at least one secondary anode is a ring shaped anode.

19. The system as recited in claim 17 wherein said at least one secondary anode is comprised of a first secondary anode and a second secondary anode.

20. The system as recited in claim 19 wherein said first secondary anode and said second secondary anode are comprised of a first concentric ring and a second concentric ring.

21. The system as recited in claim 17 further comprising:

a semiconductor wafer, said semiconductor wafer coupled to said cathode contact, said semiconductor wafer acting as a cathode and thereby receiving an electroplated film on its surface.

22. The system recited in claim 17 wherein said at least one secondary anode is disposed within said chamber of said electrochemical cell.

23. The system recited in claim 17 wherein said metallic solution is a copper solution.

24. The system recited in claim 17 wherein said power source provides said variable electrical current as a function of respect to elapsed time of said electroplating operation.

25. The system recited in claim 17 wherein said power source provides said variable electrical current as a function of physical location of application of said variable electrical

current to said semiconductor wafer.

26. The system recited in claim 17 wherein said power source provides said variable electrical current as a function of respect to a voltage that exists at discrete locations on said semiconductor wafer being electroplated.

27. The system recited in claim 17 wherein said power source provides said variable electrical current as a function of variation in a profile of said primary anode and at least said at least one secondary anode used in said electroplating operation.

28. The system recited in claim 17 wherein said power source provides said variable electrical current as a function of an influence of said chamber of said electrochemical cell on a theoretically uniform electric field.

29. The system recited in claim 17 wherein said power source provides said variable electrical current as a function of a thickness of said layer of material electroplated onto said semiconductor wafer.

30. The system recited in claim 17 wherein said power source provides a lower current value at an outer portion of said semiconductor wafer and wherein said power source provides a higher current value at an inner portion of said semiconductor wafer.

31. The system recited in claim 17 wherein said power source provides said variable electrical current by providing a variable voltage across said primary anode with respect to said at least one secondary anode.

32. An anode system for performing an electroplating operation, said anode system comprising:

a plurality of anodes, said plurality of anodes for performing an electroplating operation on a part, said plurality of anodes insulatively coupled together, said electroplating operation controlled by providing a variable current on said plurality of anodes via varying levels of voltage; and

a plurality of leads, each of said plurality of